

---

## 5.0 CUMULATIVE IMPACT SUMMARY

### 5.1 INTRODUCTION

A cumulative impact occurs due to a change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Past and present actions occurring within the area have affected the existing conditions of the surrounding area and are discussed in the affected environment description for each of the resources evaluated. The following reasonably foreseeable future actions have been identified in the study area:

- Arkansas River Navigation Project;
- Industrial Development in the Arkansas River Bottoms Near Russellville;
- Expansion of Soil and Gravel Excavation and Removal;
- Continuation of Agricultural Land Uses; and
- Increase Existing Arkansas River Commerce.

The primary past, present, and reasonably foreseeable future actions that have occurred both within and adjacent to the project areas that have been considered in the analysis of cumulative impacts were identified in Section 4.1.3.3 of the SDEIS. The SDEIS can be found online at the following location:

(<http://www.rivervalleyintermodal.org/deis.htm>).

The SDEIS considered the Highway 247 improvement project as a reasonably foreseeable future project that could have cumulative impacts when combined with the intermodal project. Since the SDEIS was written, the Highway 247 project was completed and is now considered as part of the present condition. It has been removed from the reasonably foreseeable future projects in the cumulative impact analysis for future projects, but is still considered in the overall analysis of the cumulative project impacts.

### 5.2 SUMMARY OF CUMULATIVE IMPACTS

The impact of the reasonably foreseeable future actions combined with the impact of the implementation of each of the proposed alternatives is identified for each resource category in Sections 4.2 through 4.18 of this FEIS. More details regarding cumulative impacts of each of the alternatives were discussed in Section 6 of the SDEIS, which can be found online at the following location: (<http://www.rivervalleyintermodal.org/deis.htm>).

There were meaningful long-term beneficial cumulative economic impacts identified during the analysis. There were no substantial adverse cumulative impacts identified in the cumulative impact analysis. A summary of cumulative impacts for each alternative is described below, with a focus on the Green (Preferred) Alternative. Table 5.1 at the end of this section contains a side-by-side comparison of the cumulative impacts of each alternative.

---

## **5.2.1 Arkansas River Navigation Project**

### **5.2.1.1 No Action Alternative**

No adverse or beneficial cumulative impacts associated with construction of the intermodal facilities would occur under the No Action Alternative. However, cumulative impacts caused by past, present and reasonably foreseeable future projects would continue to impact the proposed project area regardless of whether the proposed intermodal facilities are built. Improvements to the Arkansas River Navigation could result in increased barge and truck traffic at the existing Port of Dardanelle as well as potential future expansion of infrastructure in this area. The expansion of current operations would continue and some economic growth would occur. However, benefits associated with the improvements provided by the Arkansas River Navigation project would not be as valuable for the region, if the intermodal facilities are not constructed to take full advantage of the commercial navigation resources available.

### **5.2.1.2 Green (Preferred) Alternative**

An overall improvement in infrastructure that would result from development of the intermodal facilities proposed for the Green (Preferred) Alternative in combination with improvements in commercial navigation on the Arkansas River would provide long-term beneficial impacts to commercial navigation throughout the ARV. By deepening the commercial navigation channel of the Arkansas River, barges would be able to carry heavier loads and increase the productivity and utility of the intermodal facilities and the Arkansas River transportation options. The new transportation capabilities would promote economic growth and provide social benefits for the ARV region.

Implementation of the Green (Preferred) Alternative along with the improvements planned as part of the Arkansas River Navigation project could cumulatively reduce overall risks to the human and natural environments from hazardous materials. Increased river navigation capabilities and intermodal connection options would allow more of those hazardous materials to be transported by river, and environmentally safer alternative, rather than have those same materials be transported by multiple trucks or rail cars through more densely populated areas.

### **5.2.1.3 Red Alternative**

Cumulative impacts of implementation of the Red Alternative together with the increase in commercial navigation on the Arkansas River would be similar to those described for the Green (Preferred) Alternative.

### **5.2.1.4 Purple Alternative**

Cumulative impacts to social and economic resources associated with implementation of the Purple Alternative together with the impacts of the increase in commercial navigation on the Arkansas River would be similar to those described for the Green (Preferred) Alternative. However, cumulative benefits in the form of additional jobs, personal income, transportation costs savings, and other monetary returns associated with manufacturing and distribution activities would be limited by the lack of current

---

businesses and potential facilities users in the area, when compared to the Green (Preferred) and Red Alternatives.

## **5.2.2 Industrial Development in the Arkansas River Bottoms Near Russellville**

### **5.2.2.1 No Action Alternative**

No adverse or beneficial cumulative impacts associated with construction of the intermodal facilities would occur under the No Action Alternative. However, cumulative impacts caused by past, present, and reasonably foreseeable future projects would continue to impact the proposed project area regardless of whether the proposed intermodal facilities are built. It is unlikely that substantial industrial development would occur in the Arkansas River bottoms near Russellville without the construction of the intermodal facilities as proposed for the Green (Preferred) and Red Alternatives. This would result in the region not taking full advantage of the long-term beneficial cumulative impacts to the local and regional social and economic environments that could be provided through improvements to commercial navigation realized by the Arkansas River Navigation Project.

Development of the Arkansas River Bottoms near Russellville as an industrial site would occur without the intermodal facilities would likely not involve federal funding and NEPA documentation would not be required. Therefore, it is likely that adverse impacts to resources in the project area would be more severe, because the public and agency coordination process would be avoided and mitigation for known adverse impacts to resources would likely be avoided as well with the result being additional long-term adverse impacts that may have otherwise been avoided, minimized, or mitigated.

### **5.2.2.2 Green (Preferred) Alternative**

Most of the industrial development in the Russellville Bottoms in the reasonably foreseeable future is anticipated to occur within the actual intermodal facilities property as infrastructure and utilities would be provided in this area. Cumulative benefits and would likely be further in the future once the intermodal facilities property has reached capacity to support new developments.

### **5.2.2.3 Red Alternative**

Cumulative impacts of implementation of the Red Alternative together with the industrial development in the Arkansas River Bottoms near Russellville would be similar to those described for the Green (Preferred) Alternative.

### **5.2.2.4 Purple Alternative**

Impacts associated with the industrial development in the Arkansas River Bottoms near Russellville would occur outside of the cumulative impact geographic area of analysis defined for the Purple Alternative (see Section 4.1.3.2). Therefore there would be no cumulative impact associated with implementation of this project and the construction of intermodal facilities proposed under the Purple Alternative.

---

### **5.2.3 Expansion of Soil and Gravel Excavation and Removal**

#### **5.2.3.1 No Action Alternative**

It is possible that the expansion of soil and gravel operations in the region would likely result in long-term adverse impacts to economic resources, because once those lands are mined they provide less potential to be used for other more productive land uses, such as agriculture or commercial and industrial areas. Impacts from mining operations would be incremental to other impacts that are likely to result from reasonably foreseeable future projects or activities.

#### **5.2.3.2 Green (Preferred) Alternative**

The proposed intermodal facilities project under the Green (Preferred) Alternative would likely result in shifts in the sand, soil, and gravel excavation operations from within the proposed project boundaries to adjacent areas. However, the expansion of soil and gravel excavation operations is not expected to result in major land use changes at any given location as these operations would likely continue to be small, scattered operations most likely impacting lands not currently being used for other more productive uses. There could be some cumulative loss of agricultural land uses in the areas where the soil and gravel operations relocate as good farmland soils are excavated and transported to areas outside the project vicinity for use as topsoil for lawns, landscaping, or other purposes. Conversely, if land outside the boundaries of the Red Alternative eventually converts to industrial or commercial land uses, the potential for long-term adverse impacts is less than what would occur under the No Action Alternative which may result in the current soil, sand, and gravel excavations to continue to somewhat randomly expand on those lands. This is because most of the underlying soils, sand, and gravel would remain in place or onsite if it were used for industrial purposes and could potentially be converted back to productive agricultural land uses in the future.

The expansion of soil, sand, and gravel operations in the project area would result in some additional cumulative impacts to water bodies, wildlife, and vegetation resources, primarily due to erosion and sedimentation in nearby streams and/or wetlands. Sedimentation can reduce the quality of aquatic habitats making them less productive for aquatic organisms. Mining operations may also result in the loss of terrestrial habitats, such as old fields, grasslands, or forests that provide beneficial habitat for various wildlife species, and can directly impact cultural sites.

#### **5.2.3.3 Red Alternative**

Cumulative impacts of implementation of the Red Alternative together with the expansion of soil and gravel excavation would be similar to those described for the Green (Preferred) Alternative.

#### **5.2.3.4 Purple Alternative**

Impacts associated with the expansion of soil and gravel excavation would occur outside of the cumulative impact geographic area of analysis defined for the Purple

---

Alternative (see Section 4.1.3.2). Therefore, there would be no cumulative impact associated with implementation of this project and the construction of intermodal facilities proposed under the Purple Alternative.

## **5.2.4 Continuation of Agricultural Land Use**

### **5.2.4.1 No Action Alternative**

No adverse or beneficial cumulative impacts associated with construction of the intermodal facilities would occur under the No Action Alternative. However, cumulative impacts caused by past, present, and reasonably foreseeable future projects would continue to impact the proposed project area regardless of whether the proposed intermodal facilities are built. Agricultural land uses within and adjacent to the proposed project area boundaries would likely remain under the No Action Alternative. This would create a minor beneficial impact to farmland and soils resources in general; however, no additional benefits in terms of improving regional economic growth would be realized.

### **5.2.4.2 Green (Preferred) Alternative**

The agricultural land uses in the Green (Preferred) Alternative project area would be complemented by the anticipated product storage capacity and shipping options provided at the intermodal facilities. The revenues generated by new industries within the intermodal facilities and continued agriculture production on remaining farmland adjacent to the site would result in beneficial cumulative economic impacts. In the long-term, overall dust emissions from the area would be slightly reduced as the exposed soils in cultivated areas and gravel and dirt roads currently in the intermodal facilities area would be replaced by hardened surfaces, paved roads, and permanent vegetation in non-developed areas.

### **5.2.4.3 Red Alternative**

Cumulative impacts of implementation of the Red Alternative together with the continuation of agricultural land uses would be similar to those described for the Green (Preferred) Alternative.

### **5.2.4.4 Purple Alternative**

Cumulative impacts of implementation of Purple Alternative together with the continuation of agricultural land uses would be similar to those described for the Green (Preferred) Alternative. It is likely that adjacent poultry and cattle operations would benefit from the intermodal facilities.

## **5.2.5 Increase Existing Arkansas River Commerce**

### **5.2.5.1 No Action Alternative**

No adverse or beneficial cumulative impacts associated with construction of the intermodal facilities would occur under the No Action Alternative. Commerce along the Arkansas River would likely remain at current levels. The Arkansas River would remain an underutilized resource for commerce in the State of Arkansas.

---

#### **5.2.5.2 Green (Preferred) Alternative**

Beneficial cumulative impacts would be expected if the proposed intermodal facilities could potentially support additional use of the available commercial navigation system provided on the Arkansas River. The incremental increase in commercial navigation from the intermodal facilities would compliment any other increase in the existing Arkansas River commerce. This would provide potential additional economic and social benefits for the region.

#### **5.2.5.3 Red Alternative**

Cumulative impacts of implementation of the Red Alternative together with the increase of existing Arkansas River commerce would be similar to those described for the Green (Preferred) Alternative.

#### **5.2.5.4 Purple Alternative**

Cumulative impacts of implementation of Purple Alternative together with the existing Arkansas River commerce would be similar to those described for the Red Alternative.

### **5.2.6 Summary**

Cumulative impacts are the result of combining the potential effects of the project with other planned developments, as well as foreseeable development projects. The semi-rural nature of the areas surrounding the project alternatives contributed to the number of identifiable reasonably foreseeable future projects in the region. Although the cumulative impacts of each of the alternatives differ in some ways, implementation of any of the alternatives in association with any of the reasonably foreseeable future actions foreseen in the area, will result in long-term beneficial economic impacts and will not result in a significant adverse cumulative impact to the physical, social, or cultural resources in the region. Table 5.1 contains a side-by-side comparison of the cumulative impacts associated with each alternative.

<b>Table 5.1. Summary of Cumulative Impacts of the No Action, Green (Preferred), Red, and Purple Alternatives.</b>				
	<b>No Action Alternative</b>	<b>Green (Preferred) Alternative</b>	<b>Red Alternative</b>	<b>Purple Alternative</b>
<b>Land Use &amp; Infrastructure</b>	No adverse or beneficial cumulative impacts associated with construction of the intermodal facilities would occur.	Cumulative impacts would include potential land use changes, infrastructure improvements, and increased truck, rail, and barge traffic. All of these changes would result from a combination of the intermodal facilities project and other reasonably foreseeable improvements, including the Arkansas River Navigation Project.	Cumulative impacts on land use would be similar in type and magnitude to those of the Green (Preferred) Alternative.	Cumulative impacts would include potential land use changes, infrastructure improvements, and increased truck, rail, and barge traffic. All of these changes would result from a combination of the intermodal facilities project and other reasonably foreseeable improvements such as the Arkansas River Navigation Project.
<b>Farmland, Soils, &amp; Physical Environment</b>	There would be no cumulative impacts to farmland, soils, and physical environment that could occur in combination with other past, present, or reasonably foreseeable activities near the project area.	Dredging impacts associated with this project would not cause substantial increases in impacts to farmland or soils when combined with the proposed MKARNS improvements. It is possible that some of the lands adjacent to the intermodal facilities proposed for the Green (Preferred) and Red project areas would be converted to industrial or commercial land uses by the City of Russellville or private individuals. Cumulative impacts to farmland and soils due to additional industrial and commercial development anticipated in the reasonably foreseeable future are not expected to be substantial. There may be some cumulative loss of agricultural land uses where farmland soils are excavated and transported to areas outside the project vicinity. The combination of the intermodal facilities project and increased likelihood that agricultural land uses would continue in adjacent areas would result in minor beneficial cumulative impacts to farmland and soils resources.	Cumulative impacts to farmland, soils, and the physical environment would be similar to those under the Green (Preferred) Alternative.	The combination of the intermodal facilities project and increased likelihood that agricultural land uses would continue in adjacent areas would result in minor beneficial cumulative impacts to farmland and soils resources.

<b>Table 5.1. Summary of Cumulative Impacts of the No Action, Green (Preferred), Red, and Purple Alternatives.</b>				
	<b>No Action Alternative</b>	<b>Green (Preferred) Alternative</b>	<b>Red Alternative</b>	<b>Purple Alternative</b>
<b>Social Environment</b>	No adverse or beneficial cumulative impacts associated with construction of the intermodal facilities would occur.	Construction of the intermodal facilities would allow the ARV region to take full advantage of the MKARNS and the provision of additional interconnection between barges and land-based shipping options via trucks and trains. The combination of the Highway 247 improvements, MKARNS improvements, and construction of the proposed intermodal facilities is expected to provide cumulative benefits in terms of social and economic improvements and growth in the ARV. Cumulative benefits from other industrial developments in the Russellville bottoms would likely be further in the future once the intermodal facilities property has reached capacity to support new developments. Continuing agricultural land uses in areas surrounding the intermodal facilities would have primarily beneficial impacts to social and economic resources in the region.	Cumulative social impacts would be similar to those of the Green (Preferred) Alternative.	Cumulative impacts would be similar as those of the Green (Preferred) Alternative.  The communities of Knoxville, Clarksville, and the ARV would be afforded the opportunity to take full advantage of the resources available to the area.
<b>Relocation</b>	No adverse or beneficial cumulative impacts associated with construction of the intermodal facilities would occur under the No Action Alternative.	Relocations required due to the intermodal facilities project would be cumulative to relocations required for other known past, present, and reasonably foreseeable projects in the area. It is anticipated that there is currently enough replacement housing available in the general project vicinity to provide comparable, suitable options for the relatively few relocations. In the long-term, additional residential developments may be required in the ARV region.	Cumulative impacts would be similar to those of the Green (Preferred) Alternative.	Cumulative impacts would be similar to those of the Green (Preferred) Alternative.
<b>Economic</b>	No adverse or beneficial cumulative impacts associated with construction of the intermodal facilities would occur under the No Action Alternative.	Improved and expanded transportation services would be created in the ARV by providing for more economically efficient movement of goods. Currently, the region lacks shipping choices and transportation support facilities that facilitate the use of different transportation modes. The proposed facilities would result in cumulative benefits in the form of additional jobs, personal	Cumulative economic impacts would be similar to those realized under the Green (Preferred) Alternative, except for there would be less farmland revenue lost under the Red Alternative	Cumulative economic impacts would be similar to those realized under the Green (Preferred) Alternative. These cumulative benefits would be limited by the lack of current



<b>Table 5.1. Summary of Cumulative Impacts of the No Action, Green (Preferred), Red, and Purple Alternatives.</b>				
	<b>No Action Alternative</b>	<b>Green (Preferred) Alternative</b>	<b>Red Alternative</b>	<b>Purple Alternative</b>
<b>Economic (Continued)</b>		<p>income, transportation costs savings, and other monetary returns associated with manufacturing and distribution activities. In addition, establishing the intermodal facilities close to existing industries would encourage these industries to stay and/or expand their business in the region.</p> <p>Potential cumulative impacts include the expansion or establishment of existing and new market areas.</p> <p>Potential long-term, cumulative economic effects could be realized by the private Port of Dardanelle from loss of employment and personal income associated with the intermodal facilities and their activities. The recent improvement of Highway 247 could offset some of the potential adverse impacts associated with the intermodal facilities because the improvements to Highway 247 provided the same types of benefits for the existing port as they would for the proposed intermodal facilities.</p>	<p>due to less farmland being impacted.</p>	<p>businesses in the immediate area of the Purple Alternative, when compared to the Green (Preferred) and Red Alternatives.</p> <p>It is anticipated that there would be economic benefits from future residential and/or commercial developments that could occur in the Knoxville and Clarksville area due to the proximity to the proposed intermodal facilities.</p>
<b>Pedestrian &amp; Bicyclist Considerations</b>	<p>Due to the industrial nature of this project, no new pedestrian or bicycle routes are proposed as part of this project. No impacts would occur to existing pedestrian or bicycle routes.</p>	<p>Due to the industrial nature of this project, no new pedestrian or bicycle routes are proposed as part of this project. No impacts would occur to existing pedestrian or bicycle routes.</p>	<p>Due to the industrial nature of this project, no new pedestrian or bicycle routes are proposed as part of this project. No impacts would occur to existing pedestrian or bicycle routes.</p>	<p>Due to the industrial nature of this project, no new pedestrian or bicycle routes are proposed as part of this project. No impacts would occur to existing pedestrian or bicycle routes.</p>

<b>Table 5.1. Summary of Cumulative Impacts of the No Action, Green (Preferred), Red, and Purple Alternatives.</b>				
	<b>No Action Alternative</b>	<b>Green (Preferred) Alternative</b>	<b>Red Alternative</b>	<b>Purple Alternative</b>
<b>Air Quality</b>	There would be no cumulative impacts as the result of the No Action Alternative.	Cumulative impacts to local air quality may be beneficial in the long-term as a result of reduced emissions from trucks from promoting the use of barge and/or train transportation versus primarily truck transportation and lower dust emissions. Lower dust emissions would result from fewer gravel or dirt roads being utilized in the project area.	Impacts would be similar to those of the Green (Preferred) Alternative, except that the long-term reduction in dust emissions in the project area may be slightly worse under the Red Alternative because more gravel roads and agricultural lands would be replaced with hardened surfaces, structures, or permanent vegetation compared to the Green (Preferred) Alternative.	Impacts would be similar to those of the Green (Preferred) Alternative.
<b>Noise</b>	There would be no cumulative impacts as the result of the No Action Alternative.	Long-term cumulative impacts would be anticipated when the noise associated with the intermodal facilities is combined with the additional noise expected due to other reasonably foreseeable projects in the area. The increased noise levels would mainly affect the residences interspersed along Highway 247.	Cumulative impacts would be similar to those of the Green (Preferred) Alternative.	Cumulative impacts would be similar to those of the Green (Preferred) Alternative. The increased noise levels would mainly affect the residences interspersed along Highway 64.
<b>Water Quality</b>	No addition to cumulative impacts on water quality would occur in combination with other unrelated activities near the project area.	Most of the potential cumulative water quality impacts associated with reasonably foreseeable projects or activities in the area would be short-term impacts that occur during the construction phase of the intermodal facilities project. It is unlikely that construction for the various foreseeable projects, including the intermodal facilities, would occur at the same time. Water quality impacts to surface and groundwater resources in the area remain minimal.	Cumulative impacts would be similar to those of the Green (Preferred) Alternative. However, the potential for cumulative impacts to water quality would be somewhat higher due to impacts to wetlands associated with the Whig Creek	Cumulative impacts to water quality would be similar to those of the Green (Preferred) and Red Alternatives. However, the potential for cumulative impacts to water quality would be somewhat less because the Purple Alternative

<b>Table 5.1. Summary of Cumulative Impacts of the No Action, Green (Preferred), Red, and Purple Alternatives.</b>				
	<b>No Action Alternative</b>	<b>Green (Preferred) Alternative</b>	<b>Red Alternative</b>	<b>Purple Alternative</b>
<b>Water Quality (Continued)</b>			watershed and the riparian buffer zone along the Arkansas River.	location does not contain any water bodies listed on the State 303(d) list, is not located near a major urban groundwater source, and would retain a riparian buffer zone along Lake Dardanelle.
<b>Wetlands</b>	There would be no cumulative impacts to wetlands associated with any of the past, present, or reasonably foreseeable future actions.	<p>There would be minor cumulative impacts to wetlands associated with the intermodal facilities project under the Green (Preferred) Alternative in combination with other past, present, and reasonably foreseeable future projects.</p> <p>Due to the small size of most of the mining operations anticipated to occur in the area, and the number of wetlands remaining in the floodplains surrounding the Green (Preferred) Alternative, it is not likely that substantial cumulative impacts to wetlands would occur as a result of expansion of sand and gravel removal.</p>	Cumulative impacts would be similar to those of the Green (Preferred) Alternative.	No cumulative impacts are anticipated due to the combination of the proposed action and other projects. It is unlikely that developments would occur outside of the proposed intermodal facilities boundaries within the reasonably foreseeable future.
<b>Water Body Modification, Wildlife, &amp; Vegetation</b>	There would be no cumulative impacts associated with any of the past present or reasonably foreseeable future actions.	Construction of the intermodal facilities would result in minor cumulative adverse impacts due to modifications to water bodies and removal of wildlife habitats (riparian forests and wetlands). Proposed water body modifications, such as construction of a new railroad bridge over Whig Creek, construction of the levee system, and dredging in the Arkansas River, would combine with modifications associated with past, present, and reasonably foreseeable projects in the area. The main cumulative impacts would be due to the removal of wetlands associated with the existing water bodies causing decreased water quality and reduced stream bank integrity in those areas.	The cumulative impacts to water bodies, wildlife, and vegetation would be substantially higher compared to those of the Green (Preferred) Alternative. The Red Alternative would impact more riparian forests and wetlands adjacent to streams.	Construction of the intermodal facilities would result in minor cumulative adverse impacts to water bodies, wildlife, and vegetation due to modifications to water bodies and removal of wildlife habitats. Proposed water body modifications, such as dredging in Lake Dardanelle, would

<b>Table 5.1. Summary of Cumulative Impacts of the No Action, Green (Preferred), Red, and Purple Alternatives.</b>				
	<b>No Action Alternative</b>	<b>Green (Preferred) Alternative</b>	<b>Red Alternative</b>	<b>Purple Alternative</b>
<b>Water Body Modification, Wildlife, &amp; Vegetation (Continued)</b>				combine with modifications associated with past, present, and reasonably foreseeable projects in the area. The main cumulative impacts would be due to the removal of forested habitat associated with the existing water bodies causing decreased water quality and reduced shoreline integrity.
<b>Floodplains</b>	There would be no cumulative impacts of the No Action Alternative that could occur as the result of other unrelated activities near the project area.	Due to the negligible increase of flood impacts as determined by the floodplain analysis conducted for the intermodal facilities project, measurable cumulative impacts are not anticipated.	Cumulative impacts would be similar to those of the Green (Preferred) Alternative. Even though the Red Alternative would impact fewer acres of floodplain than the Green (Preferred) Alternative, the potential impacts to flood levels would be higher, primarily due to the levees for the Green (Preferred) Alternative being offset from the Arkansas River. The Red Alternative would have more impact on flood levels than the Green Alternative.	Cumulative impacts are not anticipated due to the negligible floodplain disturbance that would occur.

<b>Table 5.1. Summary of Cumulative Impacts of the No Action, Green (Preferred), Red, and Purple Alternatives.</b>				
	<b>No Action Alternative</b>	<b>Green (Preferred) Alternative</b>	<b>Red Alternative</b>	<b>Purple Alternative</b>
<b>Commercial Navigation</b>	The potential cumulative social and economic benefits provided by the improved barge transportation capabilities of the Arkansas River Navigation project, the Highway 247 project, industrial development in the project area, and the proposed intermodal facilities would not be realized.	The combination of transportation services provided at the intermodal facilities and the existing transportation services and storage capabilities provided by the adjacent private Port of Dardanelle could complement each other to attract additional users of the commercial navigation system. Any increased use of the MKARNS would provide cumulative benefits to the regional economic and social environments.	Cumulative impacts would be similar to those of the Green (Preferred) Alternative.	Cumulative impacts would be similar to those of the Green (Preferred) Alternative.
<b>Threatened &amp; Endangered Species</b>	There would be no cumulative impacts to threatened and endangered species.	Increased barge traffic using the Arkansas River due to the proposed action and the Arkansas River Navigation project could have minimal cumulative adverse impacts on the interior least tern.	Cumulative impacts would be similar to those of the Green (Preferred) Alternative.	Cumulative impacts would be similar to those of the Green (Preferred) Alternative.
<b>Cultural Resources</b>	No impacts are expected that could contribute to the cumulative disturbance or destruction of NRHP-eligible cultural resources resulting from other reasonably foreseeable projects in the area as identified below.	Direct impacts are expected that would contribute to the cumulative disturbance or destruction of cultural resources resulting from all past, present, and future construction projects in the area. Such cumulative effects would further diminish the regional archaeological record decreasing the potential of its overall research contribution; would disrupt the regional architectural character and historic setting; and would diminish the Native American cultural resources.	Cumulative impacts would be similar to those of the Green (Preferred) Alternative.	The intermodal facilities, which would involve dredging operations and grading work mainly associated with construction of the levee, could result in cumulative impacts to cultural resources when combined with impacts from the Arkansas River Navigation project.

<b>Table 5.1. Summary of Cumulative Impacts of the No Action, Green (Preferred), Red, and Purple Alternatives.</b>				
	<b>No Action Alternative</b>	<b>Green (Preferred) Alternative</b>	<b>Red Alternative</b>	<b>Purple Alternative</b>
<b>Hazardous Waste Sites</b>	There would be no cumulative impacts associated with Hazardous Waste Sites.	Improvements to the commercial navigation channel of the MKARNS would combine with industrial development and the intermodal facilities project to increase the potential for hazardous materials and wastes to be transported throughout the project vicinity and ARV region. An increase in hazardous materials and wastes in this area would increase the possibility that these materials could be accidentally released. Therefore, there is a long-term potential for short-term impacts to occur.	Cumulative impacts to hazardous waste sites would be similar to those of the Green (Preferred) Alternative.	Cumulative impacts to hazardous waste sites would be similar to those of the Green (Preferred) Alternative.
<b>Visual Impacts</b>	No cumulative impacts to the view shed are anticipated, because no activities related to the proposed intermodal facilities would occur.	No substantial cumulative visual impacts are anticipated in the project vicinity due to the combination of the proposed action and reasonably foreseeable future actions in the area.	Cumulative impacts would be similar to those of the Green (Preferred) Alternative. However, removal of the riparian vegetation along the Arkansas River would increase the potential for cumulative adverse impacts.	When viewed cumulatively, increased use of river transportation via barges would result in minor visual impacts for the entire region.